



PCT09

#12

RAW SEQUENCE LISTING

DATE: 06/04/2002

PATENT APPLICATION: US/09/830,111A

TIME: 16:01:21

Input Set : A:\PTO.VSK.txt

Output Set: N:\CRF3\06042002\I830111A.raw

ENTERED

3 <110> APPLICANT: Kaneka Corporation
 5 <120> TITLE OF INVENTION: Process for producing coenzyme Q10
 7 <130> FILE REFERENCE: T549/QX-GT2
 C--> 9 <140> CURRENT APPLICATION NUMBER: US/09/830,111A
 C--> 9 <141> CURRENT FILING DATE: 2002-04-19
 9 <150> PRIOR APPLICATION NUMBER: JP P1999-237561
 10 <151> PRIOR FILING DATE: 1999-08-24
 12 <160> NUMBER OF SEQ ID NOS: 2
 14 <210> SEQ ID NO: 1
 15 <211> LENGTH: 1653
 16 <212> TYPE: DNA
 17 <213> ORGANISM: Saioella complicata
 19 <400> SEQUENCE: 1
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 22 gagattgagt tcaggacaaa gctttgatcc gtgaggtcta catcttcagc aaatcatttc 120
 24 aaatccatat acc atg gcc tca cca gca ctg cgg ata cga agc atc agc 169
 25 Met Ala Ser Pro Ala Leu Arg Ile Arg Ser Ile Ser
 26 1 5 10
 28 tct cga tca atc gcc tct ctg cga tcg gtt acc cta aga aca gcc tcg 217
 29 Ser Arg Ser Ile Ala Ser Leu Arg Ser Val Thr Leu Arg Thr Ala Ser
 30 15 20 25
 32 gca cct tca tta cga cta aga tgt acc ccg acg agc cgg cca tcg agt 265
 33 Ala Pro Ser Leu Arg Leu Arg Cys Thr Pro Thr Ser Arg Pro Ser Ser
 34 30 35 40
 36 tca tgg gct gct gct gtg tct tcg gcg tcg aga ctg gtt gag cct gat 313
 37 Ser Trp Ala Ala Ala Val Ser Ser Ala Ser Arg Leu Val Glu Pro Asp
 38 45 50 55 60
 40 ccg aat caa cct ctc atc aat ccg ctc aac ttg gtc ggt ccc gag atg 361
 41 Pro Asn Gln Pro Leu Ile Asn Pro Leu Asn Leu Val Gly Pro Glu Met
 42 65 70 75
 44 tca aat ctt aca tcc aac atc cga tct ctc ctc ggt tca gga cac cct 409
 45 Ser Asn Leu Thr Ser Asn Ile Arg Ser Leu Leu Gly Ser Gly His Pro
 46 80 85 90
 48 tct ctc gac act gtc gct aaa tac tat gtt cag tct gag gga aag cat 457
 49 Ser Leu Asp Thr Val Ala Lys Tyr Tyr Val Gln Ser Glu Gly Lys His
 50 95 100 105
 52 att cgt ccg ctc atg gta ctg ctg atg gct cag gcg acg gag gtt gcg 505
 53 Ile Arg Pro Leu Met Val Leu Leu Met Ala Gln Ala Thr Glu Val Ala
 54 110 115 120
 56 cca aaa gtt cag ggt tgg gag aag gtc gtg gag gtt ccg gtg aac gag 553
 57 Pro Lys Val Gln Gly Trp Glu Lys Val Val Glu Val Pro Val Asn Glu
 58 125 130 135 140
 60 gga ctc gca cca cca gag gtg ctc aat gac aag aac cca gat atg atg 601

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61 Gly Leu Ala Pro Pro Glu Val Leu Asn Asp Lys Asn Pro Asp Met Met
62          145          150          155
64 aac atg agg tca gga cca tta acg aag gac ggc gag atc gag gga cag      649
65 Asn Met Arg Ser Gly Pro Leu Thr Lys Asp Gly Glu Ile Glu Gly Gln
66          160          165          170
68 acg tcg aat atc ctc gcc tcg caa cgg cgg ttg gct gag atc acg gag      697
69 Thr Ser Asn Ile Leu Ala Ser Gln Arg Arg Leu Ala Glu Ile Thr Glu
70          175          180          185
72 atg atc cat gca gca tca ctc ctc cac gac gac gtt atc gac gct tcc      745
73 Met Ile His Ala Ala Ser Leu Leu His Asp Asp Val Ile Asp Ala Ser
74          190          195          200
76 gag acc aga cga aac gca cca tcc gga aac cag gca ttc gga aac aag      793
77 Glu Thr Arg Arg Asn Ala Pro Ser Gly Asn Gln Ala Phe Gly Asn Lys
78 205          210          215          220
80 atg gcg att ttg gct ggt gat ttc ttg ttg gga cgg gcg tct gtt gca      841
81 Met Ala Ile Leu Ala Gly Asp Phe Leu Leu Gly Arg Ala Ser Val Ala
82          225          230          235
84 ttg gcg agg ttg cgc aat ccg gag gtg att gag ctt ttg gct act gtt      889
85 Leu Ala Arg Leu Arg Asn Pro Glu Val Ile Glu Leu Leu Ala Thr Val
86          240          245          250
88 att gca aac ttg gtt gag gga gag ttc atg cag ttg aaa aat act gtt      937
89 Ile Ala Asn Leu Val Glu Gly Glu Phe Met Gln Leu Lys Asn Thr Val
90          255          260          265
92 gat gat gcg att gag gct acg gcg acg cag gaa acg ttc gat tac tat      985
93 Asp Asp Ala Ile Glu Ala Thr Ala Thr Gln Glu Thr Phe Asp Tyr Tyr
94          270          275          280
96 ttg cag aag act tac ttg aag act gcg tcc ttg att gcc aag tcg tgc      1033
97 Leu Gln Lys Thr Tyr Leu Lys Thr Ala Ser Leu Ile Ala Lys Ser Cys
98 285          290          295          300
100 aga gca agt gcg ctt ctg ggt ggt gct acg cct gag gtt gct gat gct      1081
101 Arg Ala Ser Ala Leu Leu Gly Gly Ala Thr Pro Glu Val Ala Asp Ala
102          305          310          315
104 gct tat gct tac gga agg aac ctt ggt ttg gca ttc cag atc gtc gac      1129
105 Ala Tyr Ala Tyr Gly Arg Asn Leu Gly Leu Ala Phe Gln Ile Val Asp
106          320          325          330
108 gac atg ctc gac tac acc gtc tcc gct acc gac ctc ggt aag ccc gcc      1177
109 Asp Met Leu Asp Tyr Thr Val Ser Ala Thr Asp Leu Gly Lys Pro Ala
110          335          340          345
112 ggt gca gac ctc cag ctc ggt ctc gcc acc gcg ccg gcc ctc ttc gca      1225
113 Gly Ala Asp Leu Gln Leu Gly Leu Ala Thr Ala Pro Ala Leu Phe Ala
114          350          355          360
116 tgg aag cac cac gcc gag ctc ggt ccc atg atc aag cgc aag ttc tct      1273
117 Trp Lys His His Ala Glu Leu Gly Pro Met Ile Lys Arg Lys Phe Ser
118 365          370          375          380
120 gac cca gga gac gtc gag cgt gca cgc gag ttg gtc gag aaa agt gat      1321
121 Asp Pro Gly Asp Val Glu Arg Ala Arg Glu Leu Val Glu Lys Ser Asp
122          385          390          395
124 gga ttg gag aag acg aga gcc ttg gcg gag gag tat gcc cag aag gcg      1369
125 Gly Leu Glu Lys Thr Arg Ala Leu Ala Glu Glu Tyr Ala Gln Lys Ala

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126          400          405          410
128 ttg gat gca att cgg acg ttc ccg gag agt ccg gca cgg aag gct ttg 1417
129 Leu Asp Ala Ile Arg Thr Phe Pro Glu Ser Pro Ala Arg Lys Ala Leu
130          415          420          425
132 gag cag ttg acg gac aag gtg ttg act agg tca aga taggaattcg agct 1467
133 Glu Gln Leu Thr Asp Lys Val Leu Thr Arg Ser Arg
134          430          435          440
136 cgggtacccgg ggatcctcta gagtcgacct gcaggcatgc aagcttggct gttttggcgg 1527
138 atgagagaag attttcagcc tgatacagat taaatcagaa cgcagaagcg gtctgataaaa 1587
140 acagaatttg cctggcggca gtagcgcggt ggtcccacct gaccccatgc cgaactcaga 1647
142 agtgaa 1653
145 <210> SEQ ID NO: 2
146 <211> LENGTH: 440
147 <212> TYPE: PRT
148 <213> ORGANISM: Saioella complicata
150 <400> SEQUENCE: 2
151 Met Ala Ser Pro Ala Leu Arg Ile Arg Ser Ile Ser Ser Arg Ser
152 1 5 10 15
153 Ile Ala Ser Leu Arg Ser Val Thr Leu Arg Thr Ala Ser Ala Pro
154 20 25 30
155 Ser Leu Arg Leu Arg Cys Thr Pro Thr Ser Arg Pro Ser Ser Ser
156 35 40 45
157 Trp Ala Ala Ala Val Ser Ser Ala Ser Arg Leu Val Glu Pro Asp
158 50 55 60
159 Pro Asn Gln Pro Leu Ile Asn Pro Leu Asn Leu Val Gly Pro Glu
160 65 70 75
161 Met Ser Asn Leu Thr Ser Asn Ile Arg Ser Leu Leu Gly Ser Gly
162 80 85 90
163 His Pro Ser Leu Asp Thr Val Ala Lys Tyr Tyr Val Gln Ser Glu
164 95 100 105
165 Gly Lys His Ile Arg Pro Leu Met Val Leu Leu Met Ala Gln Ala
166 110 115 120
167 Thr Glu Val Ala Pro Lys Val Gln Gly Trp Glu Lys Val Val Glu
168 125 130 135
169 Val Pro Val Asn Glu Gly Leu Ala Pro Pro Glu Val Leu Asn Asp
170 140 145 150
171 Lys Asn Pro Asp Met Met Asn Met Arg Ser Gly Pro Leu Thr Lys
172 155 160 165
173 Asp Gly Glu Ile Glu Gly Gln Thr Ser Asn Ile Leu Ala Ser Gln
174 170 175 180
175 Arg Arg Leu Ala Glu Ile Thr Glu Met Ile His Ala Ala Ser Leu
176 185 190 195
177 Leu His Asp Asp Val Ile Asp Ala Ser Glu Thr Arg Arg Asn Ala
178 200 205 210
179 Pro Ser Gly Asn Gln Ala Phe Gly Asn Lys Met Ala Ile Leu Ala
180 215 220 225
181 Gly Asp Phe Leu Leu Gly Arg Ala Ser Val Ala Leu Ala Arg Leu
182 230 235 240
183 Arg Asn Pro Glu Val Ile Glu Leu Leu Ala Thr Val Ile Ala Asn

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184	245	250	255
185 Leu Val Glu Gly Glu Phe Met Gln Leu Lys Asn Thr Val Asp Asp			
186	260	265	270
187 Ala Ile Glu Ala Thr Ala Thr Gln Glu Thr Phe Asp Tyr Tyr Leu			
188	275	280	285
189 Gln Lys Thr Tyr Leu Lys Thr Ala Ser Leu Ile Ala Lys Ser Cys			
190	290	295	300
191 Arg Ala Ser Ala Leu Leu Gly Gly Ala Thr Pro Glu Val Ala Asp			
192	305	310	315
193 Ala Ala Tyr Ala Tyr Gly Arg Asn Leu Gly Leu Ala Phe Gln Ile			
194	320	325	330
195 Val Asp Asp Met Leu Asp Tyr Thr Val Ser Ala Thr Asp Leu Gly			
196	335	340	345
197 Lys Pro Ala Gly Ala Asp Leu Gln Leu Gly Leu Ala Thr Ala Pro			
198	350	355	360
199 Ala Leu Phe Ala Trp Lys His His Ala Glu Leu Gly Pro Met Ile			
200	365	370	375
201 Lys Arg Lys Phe Ser Asp Pro Gly Asp Val Glu Arg Ala Arg Glu			
202	380	385	390
203 Leu Val Glu Lys Ser Asp Gly Leu Glu Lys Thr Arg Ala Leu Ala			
204	395	400	405
205 Glu Glu Tyr Ala Gln Lys Ala Leu Asp Ala Ile Arg Thr Phe Pro			
206	410	415	420
207 Glu Ser Pro Ala Arg Lys Ala Leu Glu Gln Leu Thr Asp Lys Val			
208	425	430	435
209 Leu Thr Arg Ser Arg			
210	440		

VERIFICATION SUMMARY

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Input Set : A:\PTO.VSK.txt

Output Set: N:\CRF3\06042002\I830111A.raw

L:9 M:270 C: Current Application Number differs, Replaced Current Application No
L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date